

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listing, of claims in the application:

LISTING OF CLAIMS:

Claims 1-10. (Canceled)

11. (Previously Presented) A method of generating a binary sequence of random numbers based on random selection of a path of photons on a beam splitter, the method comprising:

- emitting photons or photon swarms according to a randomness principle using a photon source, the photon source including a low power light source;
- splitting the photons or photon swarms emitted by the photon source during a measurement period using at least a first beam splitter and a second beam splitter disposed in a beam path of the light source, the second beam splitter being disposed downstream of the first beam splitter in a first downstream path of the first beam splitter;
- detecting, in accordance with the splitting, the photons or photon swarms from the splitting using a first, a second and a third detector connected to a detection device, the first detector being disposed in a second downstream path of the first beam splitter, the second detector being disposed in a third downstream path of the second beam splitter, the third detector being disposed in a fourth downstream path of the second beam splitter;
- generating a random number when the photons or photon swarms detected at the first, second and third detectors together correspond to a predefined photon scheme, the photon scheme including generating a random number when only one of the second and third detectors registers a detection of the photons or photon swarms.

12. (Previously Presented) The method as recited in claim 11 wherein the photon scheme includes generating a random number when during the measurement period no photon of the photons or photon swarms is detected at the first detector and at least one photon of the photons or photon swarms is detected at only one of the second and third detectors.

13. (Previously Presented) The method as recited in claim 11 wherein the photon scheme includes generating a random number when during the measurement period at least one photon of the photons or photon swarms is detected at the first detector and at least one

photon of the photons or photon swarms is detected at only one of the second and third detectors.

14. (Previously Presented) The method as recited in claim 11 wherein the at least a first and second beam splitters includes at least a third beam splitter disposed in the beam path between the light source and the second beam splitter, each of the at least a third beam splitter including an associated fourth detector disposed in a respective downstream path of the associated at least a third beam splitter, the photon scheme including generating a random number only when a photon swarm of the photons or photon swarms including a number of photons defined by the photon scheme is detected at the first, second, third and fourth detectors.

15. (Previously Presented) An apparatus for generating a binary sequence of random numbers, the apparatus comprising:

- a low power light source including a photon source for emitting individual photons and/or photon swarms according to a randomness principle;

- a first and a second beam splitter disposed downstream from the light source in a beam path of the light source, the first beam splitter being disposed between the light source and the second beam splitter;

- a first detector disposed in a downstream path of the first beam splitter;

- a second detector and a third detector disposed in a first and a second downstream path, respectively, of the second beam splitter; and

- a detection device for generating the random numbers, the detection device being disposed downstream from the first, second and third detectors, the detection device including at least one counter and computer.

16. (Previously Presented) The apparatus as recited in claim 15 wherein the first beam splitter includes a trigger beam splitter and the first detector includes a trigger detector.

17. (Previously Presented) The apparatus as recited in claim 15 wherein the photon source includes an attenuated laser.

18. (Previously Presented) The apparatus as recited in claim 15 wherein the photon source

includes a thermal light source.

19. (Previously Presented) The apparatus as recited in claim 15 wherein the photon source includes a spectral lamp.

20. (Previously Presented) The apparatus as recited in claim 15 wherein the photon source includes a light emitting diode.

21. (Previously Presented) The apparatus as recited in claim 15 wherein the photon source includes a pinched light source.